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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/752,704	12/28/2000	J. A. Nolen	1387.006USU	9405

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EXAMINER

LEVY, NEIL S

ART UNIT	PAPER NUMBER
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1616

DATE MAILED: 08/29/2003

7

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

09	Application No. 752704	Applicant(s) NOLAN et al
	Examiner NB/C Lemy	Group Art Unit 7616 9

—The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address—

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Status

- ☒ Responsive to communication(s) filed on 7/2/02
- ☐ This action is **FINAL**.
- ☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- ☒ Claim(s) 1-21 is/are pending in the application.
- Of the above claim(s) 1, 2, 18-21 is/are withdrawn from consideration.
- ☐ Claim(s) _____ is/are allowed.
- ☒ Claim(s) 3-14 and 16 is/are rejected.
- ☒ Claim(s) 15 and 17 is/are objected to.
- ☒ Claim(s) 1-21 are subject to restriction or election requirement.

Application Papers

- ☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.
- ☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.
- ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119 (a)-(d)

- ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
 - ☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been received.
 - ☐ received in Application No. (Series Code/Serial Number) _____
 - ☐ received in this national stage application from the International Bureau (PCT Rule 1.7.2(a)).

*Certified copies not received: _____

Attachment(s)

- ☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____
- ☒ Notice of Reference(s) Cited, PTO-892
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Interview Summary, PTO-413
- ☐ Notice of Informal Patent Application, PTO-152
- ☐ Other _____

Office Action Summary

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1, 2, 18-21 stand withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in Paper No. 6.

The patent office is not in a position to provide testing for validation; if the compositions were provided in feeds, we assume they could inhibit ant predation, as shown by Vandermeer.

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 3-14 and 16 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. There is insufficient basis for one in the art to know the claimed compounds, even at the claimed rate of evaporation would attract mosquitoes, in general, or for any particular species, because, the data show only that in the presence of carbon dioxide, attract any of 1-octyn-3-ol. In fact, the instant specification specifies that analogs of this compound are inhibiting (p.3, line 20). The specification goes on to any suitable attracting effective amount may be employed. However, it is left to the

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artisan to have to test for each mosquito species, what compound, what mix with all possible analogs with in the formula R_1 species, except those inhibitory compounds, thus, for straight claim species, $12 \times 11 \times 10 \times \dots$ permutation, for each mosquito species. We deem this an inordinate amount of testing and experimentation to be required, in order to determine which particular compound or combinations are effective at what levels for what species, with an without carbon dioxide. Further, we note that although the alkene analog is less attractive in the presence of carbon dioxide than the alkyne, they are both attractive for the mosquito species tested. Likewise, the 3 methyl homologs are repellent (col. 1, line 65 – Col. 2, line 18, of Nolen, 6362235 and col. 4, line 4-9). The Nolen patent likewise presents tests of only 2 of the claimed repellent analogs. We are left with realization that a one carbon substitution can lead to repellency rather than attractancy, and thus, all analogs need to be tested to even determine whether or not they are attractants, to say nothing of combination and concentrations, and species specificity.

Further, the Vander Meer patent, 5721274 shows, for ants, a concentration dependency: 1-Heptyn-3-OL @ 1% is repellent (Table VI, 37262, Col. 10, while @ .1% is neutral. We also find # of carbons important: whether the octyn or octane, effect are the same, 10% (col. 10%) but heptyn or heptene is less repellent at 17.5%, again emphasizing the need to test for a given species, the specific compound and mixes thereof at a wide range of concentrations. Applicants show efficacy of 1-octyn-3-OL, within the 0.01- 10mg/hr, in the presence of carbon dioxide.

Claims 3-14 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nolen 5205064 and Wigton et al 5813166 in view of Vander Meer et al., Bernier et al 6267953 and Saini et al '89.

Nolen states different combination of components are effective for specific insects – carbon dioxide and an appropriate pheromone can be used to attract close and far insects, respectively (column 3, lines 15-18, 33-34 and column 4, lines 42-44). Means are pressurized, to attract mosquitoes, with octenol. Wigton show slow release by evaporation can be controlled, to permit desired rate of release (column 3, lines 17-23), here at 0.5 mg/hour. Simultaneous release is shown, controllable by operator (column 3, lines 16-66). Bernier (see below) also shows simultaneous release of attractant alcohol and carbon dioxide.

Optimization protocols are shown by Vander Meer – using ants as the arthropod of interest, various analogs and concentrations of compounds, of the instant alkyls and Nolen's octanol, are tested for efficacy against the species of concern. Here, 1-octyn-3-ol is equivalent to 1-octene-3-ol-both give 0.10% response (Table VI) Bernier shows carbon dioxide (col. 6, line 45-49) and alcohols, -1-octen-3-ol (col. 17, line 49, 50) to attract insects, exemplified by mosquitoes (col. 6, line 51-53). The same compound, and analogs thereof including 1-octyn-3-OL were also tested on flies by Saini showing that the 1-octen-3-OL although an attractant, was not as effective as the 1-octyn-3-OL. Although there is no specific attractant in the cited art of the 1-alkyl-3-ols to mosquitoes, analogs, the alkene-3- alcohols, are so effective, and with carbon dioxide, shown by Wigton as to how to be released with an alcohol attractant. One of ordinary skill in the

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art would find it obvious to test the superior 1-octyn-3-OL attractant in order to optimize control over the insect of concern. Motivation to so test is provided by the teaching of Saini, showing of the octanol, 1-octene-3-OL, 1-octyn-3-OL series, these 1-octyn-3-OL is of 1-octyn-3-OL is of greatest attractancy to flies.

Thus one of ordinary skill in the art of mosquito control would find it obvious to use the Nolen-Wigton means, as desired, to attract and dispose of mosquitoes, with the chemical attractant chosen, as taught by Nolen, and Saini, as optimal for control of the particular pest of concern. The octen-OL analogs of the claimed compound have been shown effective against mosquitoes, flies and ants. The octen-OL and actyn-OL have been shown equivalently effective for ants; the octyn superior for flies. One in the art would have every expectation upon testing to find the octyn effective, if not superior, to the octen in mosquitoes. This is the instant invention as it is disclosed.

Applicant's arguments with respect to claims 3 -14 and 16 have been considered but are moot in view of the new ground(s) of rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Neil Levy whose telephone number is (703) 308-2412. The examiner can normally be reached on Tuesday through Friday 7 AM to 5:30 Pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jose Dees can be reached on (703) 308-4628. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1235.

Levy/LR
August 14, 2003

A handwritten signature in black ink, appearing to read "Neil S. Levy".

NEIL S. LEVY
PRIMARY EXAMINER